DRAFT ENVIRONMENTAL ASSESSMENT

GUADALUPE RIVER FLOOD CONTROL PROJECT
REPLACEMENT OF FORMER UNION PACIFIC RAILROAD BRIDGE NO. 3
WITH A VEHICULAR BRIDGE
CONTRACT 3A – PHASE 3

SAN JOSE, CALIFORNIA, SANTA CLARA COUNTY

MARCH 2008

US Army Corps of Engineers

Sacramento District

Environmental Resources Branch

DRAFT

FINDING OF NO SIGNIFICANT IMPACT
GUADALUPE RIVER FLOOD CONTROL PROJECT
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CONTRACT 3A – PHASE 3
SAN JOSE, CALIFORNIA, SANTA CLARA COUNTY

1. I have reviewed and evaluated the information in this Environmental Assessment (EA) prepared for the construction of a vehicular bridge at the former Union Pacific Railroad (UPRR) Bridge No. 3 site in downtown San Jose, California. I have also considered the views of other interested agencies, organizations, and individuals concerning the proposed action.

2. The U.S. Army Corps of Engineers and the Santa Clara Valley Water District (SCVWD), the non-Federal sponsor, propose to construct a new two-lane vehicular bridge on the Guadalupe River to replace the original Union Pacific Railroad (UPRR) Bridge No. 3. The new vehicular bridge would provide maintenance access to a new pedestrian trail and public access to a parcel of UPRR land.

3. The vehicular bridge project is a modification to the Guadalupe River Flood Control Project currently under construction by the Corps and the SCVWD. The flood control project has been designed to provide 100-year level of flood protection to downtown San Jose and surrounding areas while providing recreational access to the flood control project area. Removal of the UPRR Bridge No. 3 was completed in 2006 as a feature of the flood control project.

4. The possible consequences of replacing the bridge as described in the EA have been studied with consideration given to environmental, socioeconomic, and cultural feasibility. The environmental effects have been coordinated with the U.S. Fish and Wildlife Service, National Marine Fisheries Services, San Francisco Regional Water Quality Control District, and California State Historic Preservation Officer.

5. Based on my review, I have determined that the proposed action would result in no significant adverse effects on environmental resources. I am convinced that there is no need to prepare an Environmental Impact Statement. Therefore, an EA and Finding of No Significant Impact provide adequate environmental documentation for the proposed action.

_____ _____

Date

Thomas C. Chapman, P.E.
Colonel, U.S. Army
District Engineer

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1.0 PURPOSE AND NEED FOR ACTION

1.1 Proposed Action

The U.S. Army Corps of Engineers (Corps) and the Santa Clara Valley Water District (SCVWD), the non-Federal sponsor, propose to construct a new two-lane vehicular bridge on the Guadalupe River at the site of the original Union Pacific Railroad (UPRR) Bridge No. 3 in downtown San Jose. The new vehicular bridge would provide maintenance access to a new pedestrian trail and public access to a parcel of UPRR land.

The vehicular bridge project is a modification to the Guadalupe River Flood Control Project currently under construction by the Corps and the SCVWD. The flood control project has been designed to provide 100-year level of flood protection to downtown San Jose and surrounding areas while providing recreational access to the flood control project area. Removal of the UPRR Bridge No. 3 was completed in 2006 as part of the flood control project.

Construction of the new vehicular bridge would also require modifying the flood control project's mitigation plan for effects to shaded riverine aquatic (SRA) cover as described in the Mitigation Monitoring Plan (MMP) updated in 2001. The Corps and the SCVWD propose to compensate for the loss of 300 linear feet (0.10 acre) of infill riparian mitigation plantings at the bridge site by using excess mitigation established offsite on Guadalupe Creek. Any additional loss of riparian vegetation due to construction of the bridge would also be compensated by using the excess mitigation on Guadalupe Creek.

1.2 Location of the Project Area

The Guadalupe River Flood Control Project is located in the downtown area of the city of San Jose in Santa Clara County. Plate 1 shows the location and features of the flood control project. The new vehicular bridge project would be located on the Guadalupe River between Coleman Avenue and New Julian Street about 175 feet north of the location of the new UPRR Bridge No. 4 to be constructed as part of the flood control project (Plate 2). Areas to the east and west include commercial buildings, public parking garage, and several small businesses.

The project area for the vehicular bridge lies within the boundaries identified as Segment 3A of the flood control project. The project area in this EA encompasses the Guadalupe River channel at the former UPRR Bridge No. 3 site, the vicinity of the surrounding streets leading to where UPRR Bridge No. 3 is located, and the immediate area that is adjacent to the Sobrato properties.

1.3 Background

1.3.1 Authority

The Guadalupe River Flood Control Project was authorized by Congress under the Water Resources Development Act of 1986 (Public Law 99-662). The purpose of the flood control project was for flood protection and included an underground bypass conduit, channel widening,

bank and invert lining, and a wildlife mitigation plan. The 1986 authority was subsequently amended by the Energy and Water Development Appropriations Act for FY 1990 (Public Law 101-101) to provide additional funding for flood protection refinements, recreation, and habitat protection.

1.3.2 Authorized Project

The Corps completed the final Guadalupe River Interim Feasibility Report and Environmental Impact Statement – Guadalupe River and Adjacent Streams Investigation in July 1985. Construction of the authorized Guadalupe River Flood Control Project began in 1992 after conditional State water quality certification was obtained, as required under Section 401 of the Clean Water Act. As a condition of the water quality certification, a MMP was prepared in June 1992. The MMP specified mitigation measures for compensating riparian vegetation, fish spawning-gravel, fish passage, and thermal effects.

Construction between 1992 and 1996 was conducted in three segments. Work in Segment 1, the most downstream reach between the I-880 freeway and Hedding Street, consisted of an overflow area with a planting bench and armoring on the eastern and western banks, as well as portions of the invert channel near I-880. Work in Segment 2 between Hedding Street and Coleman Avenue included an overflow area with a planting bench and armoring on the eastern and western banks, as well as portions of the channel bed downstream from the Coleman Avenue Bridge. Work in Segment 3 included widening the eastern bank; armoring the western and eastern banks; armoring the channel bed from Coleman Avenue Bridge to UPRR Bridge No. 4; constructing retaining walls from Santa Clara Street to Park Avenue, a box culvert structure north of Park Avenue to connect with another existing bypass box culvert, and a pedestrian walkway/maintenance roads along the river; and general landscaping.

Construction of the authorized project's flood protection features ceased in 1996 due to concerns regarding the adequacy of the mitigation, new and proposed listings of threatened and endangered species, and receipt of a notice of intent to sue from four environmental organizations. These environmental organizations were concerned that (1) work in Segment 3 of the authorized project would harm steelhead and chinook salmon runs; and (2) the riparian mitigation in the 1992 MMP did not adequately replace the SRA cover affected by the project.

As a result, the flood control project was modified as described in the final Integrated General Re-Evaluation Report/Environmental Impact Report-Supplemental Environmental Impact Statement (GRR/EIR/SEIS) for Proposed Modifications to the Guadalupe River Project, Downtown San Jose, California, February 2001. The 2001 GRR/EIR/SEIS described the construction features and analyzed the effects of replacing the UPRR Bridge No. 4; removing UPRR Bridge No. 3 to provide room for other features of the flood control project; and constructing a maintenance road, section of the Riverwalk trail, and pedestrian overpass or below-grade crossing. The GRR/EIR/SEIS did not address replacing UPRR Bridge No. 3 with a vehicular bridge.

The Corps, SCVWD, and the resources agencies, including the U.S. Fish and Wildlife Service (USFWS), San Francisco Bay Regional Water Quality Control Board (RWQCB),

National Marine Fisheries Service (NMFS), and California Department of Fish and Game (CDFG), agreed that all areas of open riparian canopy (SRA) at the time the 2001 GRR/EIR/SEIS was prepared, totaling 878 linear feet of SRA, would be planted in Segment 3A. Planting the open areas within the SRA zone was required to mitigate for adverse effects of the flood control project by creating a continuous canopy of riparian trees through the non-hardscaped portion of this segment of the project. The MMP was also updated and finalized in February 2001.

Between 2001 and 2007, a temporary trail undercrossing at the UPRR Bridge No. 4 was constructed in 2006; the UPRR Bridge No. 3 was removed in 2006; and 730 linear feet of SRA cover infill mitigation plantings were completed in December 2007 at the former UPRR Bridge No. 3 site and at other openings in Segment 3A. The remaining work for the flood control project consists of bridge abutment work at the Coleman Avenue Bridge, replacement of the UPRR Bridge No. 4 with new tracks and a permanent pedestrian undercrossing, and the remaining 148 linear feet of SRA cover infill mitigation agreed to in 2001.

According to the 2001 GRR/EIR/SEIS, the Corps was to plant 878 linear feet of SRA cover as mitigation in Segment 3A, including the area where the vehicular bridge is proposed, for the flood control project. Completion of this mitigation was delayed due to subsequent consideration of additional project features. On February 23, 2007, the San Francisco Bay Regional Water Quality Control Board (RWQCB) issued a Notice of Violation for failure to plant SRA vegetation in Segment 3A. In response, the Corps submitted an infill mitigation proposal to the resource agencies for their review, comment, and approval.

The Corps completed the planting of 730 linear feet of native riparian vegetation in Segment 3A as infill mitigation in December 2007. Herbaceous vegetation is scheduled to be planted in the spring of 2008. These plantings partially fulfill the mitigation requirement of the flood control project to plant 878 linear feet of SRA cover. The area for the remaining 148 linear feet of SRA cover infill mitigation agreed to in 2001 has revegetated through natural recruitment and is currently providing SRA cover habitat. This vegetation includes exotic plant species.

1.3.3 Need for UPRR Bridge No. 3

During construction of Segment 3A features, UPRR informed the Corps that the City of San Jose (City) had restricted access to their 10-acre parcel of land on the east side of the river north of the Sobrato property. The City would not allow UPRR to access their property through the neighborhood at the east end or directly from Coleman Avenue. As a result, the only access would be via a vehicular bridge across the Guadalupe River. Since the City's action restricted the parcel from potential commercial center development, UPRR maintained that its economic interests were adversely affected by proposed removal of the UPRR Bridge No. 3 without a replacement bridge. Following negotiations with UPRR, the Corps concluded, based on changed conditions, that UPRR does indeed have a compensable interest in the bridges for railroad purposes.

The flood control project could not have been completed without an agreement with UPRR to replace the UPRR No. 3 bridge with the new vehicular bridge. As a result, a Memorandum of

Agreement (MOA) between the Corps and UPRR was signed on April 23, 2003. The MOA included (1) the Corps replacing UPRR Bridge No. 3 with a vehicular bridge; (2) UPRR allowing the east bank alignment of the riverwalk at Bridge No. 4 to be a pedestrian undercrossing beneath the new bridge, pending the City obtaining an encroachment permit; and (3) agreement with UPRR that only allows an at-grade pedestrian crossing at Bridge No. 4 on the west bank. The Corps also determined that the new vehicular bridge was needed for maintenance access to a new pedestrian trail. The environmental effects of the new vehicular bridge as a modification to the flood control project were not evaluated in the 2001 final GRR/EIR/SEIS.

1.3.4 Areas of Controversy or Unresolved Issues

According to the Coordination Act Report, dated September 2006, the USFWS does not support the use of offsite mitigation credits on Guadalupe Creek to replace the loss of onsite mitigation for the construction of the new vehicular bridge. However, the Corps and SCVWD have exhausted all onsite opportunities on the Guadalupe River, and the only remaining mitigation option is to use offsite credits at Guadalupe Creek. Site visits in Segment 3A have indicated that there are no remaining areas to be used for mitigation. In addition, other potential sites for offsite (infill) plantings were hydraulically evaluated and found to adversely affect flow conveyance.

According to the page 4-33 of the 2001 MMP, "SCVWD would use this mitigation [restored SRA cover vegetation and improved aquatic habitat along the lower reach of Guadalupe Creek] for other projects only if all of the mitigation is not needed for the Guadalupe River Project." At the time, "only about 7,178 linear feet will be directly counted as mitigation for the flood control project." However, subsequent flood control work and field visits have indicated that some of the remaining mitigation credits are needed for compensation at the new vehicular bridge site due to insufficient open areas for planting in Segment 3A.

1.4 Purpose of the Environmental Assessment

This EA (1) describes the existing environmental resources in the vehicular bridge project area; (2) evaluates the effects and significance of the alternatives on those resources; and (3) proposes mitigation measures to avoid or reduce any adverse effects to less-than-significant levels. Based on the findings of the EA, a determination will be made whether a Finding of No Significant Impact is warranted or whether preparation of a SEIS is necessary.

1.5 Previous Environmental Documents

- U.S. Army Corps of Engineers. Guadalupe River and Adjacent Streams Investigation, Final Guadalupe River Interim Feasibility Report and Environmental Impact Statement. San Francisco District, San Francisco, California, 1985.

- U.S. Army Corps of Engineers. Guadalupe River, California, General Design Memorandum (two volumes and revised pages dated July 9, 1993). Sacramento District, Sacramento, California, 1991.

- U.S. Army Corps of Engineers. Integrated General Re-Evaluation Report/Environmental Impact Report – Supplemental Environmental Impact Statement for Proposed Modifications to the Guadalupe River Project, Downtown San Jose, California. Sacramento District, Sacramento, California, 2001.

2.0 ALTERNATIVES

2.1 Alternatives Not Considered Further

2.1.1 Alternative Vehicular Access Routes

Two alternative access routes were considered for vehicular access to the UPRR's 10-acre parcel of land on the east side of the river north of the Sobrato property. Access other than a new vehicular bridge at the UPRR Bridge No. 3 location would avoid adverse effects to the infill mitigation plantings, as well as satisfy UPRR's concerns regarding access to their future commercial center on the 10 acres. These alternative routes are discussed below, including the reasons that they were not considered further.

Access from Bassett Street

One alternative route would be a new section of roadway extending from the north end of Bassett Street, approximately 700 feet east of the Guadalupe River. The new roadway would have to cross the UPRR tracks at grade. The official policy of the UPRR is to not approve at-grade crossings. In addition, the State Public Utilities Commission (PUC) has a policy of not supporting any new at-grade crossings unless another existing crossing with equal or a greater amount of vehicle traffic is closed in the same jurisdiction. Currently, there are no other potential crossings available for closure in the city of San Jose.

Even if a new at-grade crossing were approved, Bassett Street is designed as an interior circulation street. The street is designed only to serve local commerce and does not have any convenient access to arterial (collector) streets. Given its location, potential customers of a commercial center at the UPRR property could find it difficult to locate this access. Traffic using Bassett Street would also have to pass through residential areas whose street pattern was designed for serving local traffic.

Access from Ryland/Santa Teresa Streets

Ryland and Santa Teresa Streets are local streets. The UPRR property has a narrow frontage along the sharp curve segment of Ryland Street. Due to the geometric constraints and its vicinity to a traffic signal (Santa Teresa and Coleman), access from this corner would pose significant operational and safety issues, especially with the high traffic volume projected from the use of the future commercial center. Additionally, Santa Teresa Street turns north to become San Pedro Street into the historic Northside neighborhood area. The policy of the City is that this neighborhood should be protected from through traffic created by any new development in

the downtown area. The City and Redevelopment Agency staff have stated that no access (other than emergency access) would be allowed to the UPRR property from Santa Teresa Street.

2.1.2 Alternative Bridge Design

An alternative bridge design was also considered to provide vehicular access to the UPRR parcel. This design was an at-grade double span design with piers rather than the proposed at-grade three-span design with piers. However, the alternative design was not considered further due to the proximity of the piers to the low-flow channel, which could interfere with flows and result in significant adverse effects on fisheries.

2.2 Alternatives Considered in Detail

2.2.1 No Action

Under the no action alternative, the Corps and the SCVWD would not replace UPRR Bridge No. 3 on the Guadalupe River with a new two-lane vehicular bridge. As such, the Corps would not be in compliance with the MOA signed on April 23, 2003, between the Corps and the UPRR. Maintenance access to the new pedestrian trail, as well as public access to the parcel of UPRR land, would remain unresolved. However, the infill mitigation plantings completed in December 2007 would be left intact.

2.2.2 New Vehicular Bridge

This alternative would consist of construction of a vehicular bridge at the former UPRR Bridge No 3 site on the Guadalupe River. The major work activities associated with the project are summarized in Table 1 and discussed in more detail below. Plate 3 shows the limits of the bridge work.

Permits and Utilities

Prior to initiation of construction, the contractor would be required to obtain all permits necessary to perform the work, including a Stream Alteration Agreement permit from the CDFG.

In addition, they would be required to verify the depths and locations of any existing utility lines in the work area, as well as notifying and coordinating with the utility companies

Table 1. Summary of Major Features of the New Vehicular Bridge Project

Work	Description
Permits and Utilities	Obtain necessary permits, and temporarily disconnect and relocate utilities, as required.
Soils testing	Drill bore holes in the bank and channel for soil tests. Characterize soils to determine procedures for disposal or reuse of soils to be excavated for vehicular bridge.
Access roads and ramps	Construct temporary access road on top of west bank, if necessary. Construct temporary construction access ramps at the vehicle bridge site and possibly a temporary platform.
Staging area	Move equipment and materials to a previously disturbed area on the top of the bank outside the channel.
Clearing and grubbing	Clear and grub vegetation within excavation footprint .
Dewatering	Dewater, as necessary, to excavate and construct pile caps and piers for vehicular bridge. Pump remaining water into river, or dispose of water in accordance with regulatory requirements.
Excavation	Demolish existing maintenance road/trail on top of bank.
Construction of vehicular bridge	Construct reinforced concrete vehicular bridge with abutment, piers, railings, and sidewalk; construct access ramp on west bank; and place rock riprap for erosion control.
Section of pedestrian path	Demolish and temporarily remove a section of the existing permanent pedestrian trail on both sides of the river, and replace the demolished portion with a new section after construction of the bridge.
Landscaping and irrigation	Landscape disturbed areas to prevent erosion; hydroseed and revegetate top-of bank; and replace and construct permanent irrigation facilities.
Site restoration	Restore all affected areas of the work, including the river channel and temporary access routes.
Replace lost infill mitigation	Use SRA cover mitigation established offsite on Guadalupe Creek to offset the loss of 300 linear feet (0.10 acre) of SRA cover infill mitigation plantings at the bridge site.

directly concerning the timing and degree of the work. If required ,the following BMP's would be used to minimize or reduce any effects:

- The existing box culvert would have a new retaining wall constructed to protect it.
- Any existing manholes, sewer lines, and storm drains would be replaced with new ones.
- Telephone, electrical, and fiber optic lines would be replaced or temporarily re-located to avoid permanent effects. Any temporary outage would be reported by the contractor to the respective companies prior to disturbance.

Soils Testing

Soil testing on the bank and in the channel would be conducted prior to construction of the bridge. For soil tests, bore holes would be drilled into the bank and channel, and samples would be removed. These samples would be analyzed to characterize the soils and determine procedures for disposal or reuse of the soils to be excavated for the vehicular bridge.

Access Roads and Ramps

There are two existing construction access roads leading to the project site. The one from the existing Autumn Street would provide accesses to the west bank of the river, and Santa Teresa Street off Coleman Avenue would provide access to the east bank of the river. Construction worker's and haul routes to and from the site would most likely be the existing Autumn Street and Santa Teresa Street and Coleman Avenue off Highway 87 or Interstate I-880. Autumn and Santa Teresa Streets has low volumes of traffic, while Coleman Avenue has higher volumes especially during peak commuter hours.

No new roads would be constructed. After a short section of the existing pedestrian trail and landscaping is removed on the east and west sides of the bridge, the area would be graded to provide a short temporary access route from Autumn Street to the channel. On the east bank, a temporary access route from the Sobrato parking lot to the channel would be used. A temporary access ramp on the west bank could also be installed for heavy equipment when constructing the vehicular bridge. After construction, these temporary routes and access ramp would be removed and regraded or sloped o simulate existing conditions prior to construction of the bridge.

Staging Areas

All staging areas for equipment and materials would be confined to areas outside the channel within the limits of work shown in Plate 3. The staging areas in these areas on the top of the bank are highly disturbed from previous project activities since there is pavement or no native upland vegetation growth. Limits of work along the top of the bank used for staging include both the north and south sides of the vehicular bridge. These disturbed areas could be used to store construction equipment, vehicles, construction materials, and stockpile material for fill. Within the project limits on the top of the bank, the contractor would also determine where they want to locate their offices, equipment, and stockpile other materials.

Dewatering

During construction, a section of the Guadalupe River would be dewatered to excavate and construct the pile caps for the vehicular bridge. Temporary cofferdams using sheet piles, sand bags, and/or a bladder dam would be installed to redirect the river flow around the work area, and pumps would be used to remove the remaining water in accordance with regulatory requirements. This water could be pumped back into the river, or removed and disposed offsite, depending on the chemical and physical characteristics of the water. The cofferdam would be constructed to form either a full circle or a half-circle dam around the work area, depending on the location of the pier.

Dewatering would facilitate construction, as well as minimize adverse effects on water quality downstream. To avoid significant adverse effects to threatened steelhead, dewatering would only occur between June 1 and October 15. The non-Federal sponsor would be required to obtain a Stream Alteration Agreement permit from the California Department of Fish and Game (CDFG) prior to construction.

Vehicular Bridge Structure

The overall general site plan of the project including limits of work (footprint) for the vehicular bridge is shown on Plate 3. Soil borings would be completed prior to construction of the bridge. Design of all bridge components is based on AASHTO/Caltrans "Bridge Design Specifications (BDS)." Analysis of the pre-cast/pre-stressed "I" girders was conducted using Imbsen Associates BDS program. Initial bridge design was conducted for static bridge loading, including the self-weight of the bridge elements, additional dead load of the sidewalk and railings, and future wearing surface replacement. Bridge deck and girders were evaluated for two stages of construction as well as final design. Girders were designed to be simply supported initially, carrying only self-weight and the bridge deck. Once the deck slab cures, the girders are fixed at the ends as so the bridge deck reinforcing has been designed to carry the resulting negative movements at the supports. Design of the girders was evaluated for the full additional dead loads and live loads as well.

Plans for the vehicular bridge show a two-lane vehicular bridge with a 34-foot-wide lane complying with City of San Jose standards. On the bridge, two 7-foot-wide sidewalks with curbs, guard rails, and light posts would also be included. The roadway east of the vehicular bridge would be constructed by the City of San Jose at a later date. The new bridge would be constructed using two piers placed within the river channel. The two seat abutments would be spaced approximately 45 feet from each of the piers.

The bridge, as designed with seismic parameters, consists of three spans of 8 pre-cast-pre-stressed "I" girders per span. The concrete seat abutments constructed at the beginning and end of the bridge are standard cantilever seat type abutments with wing walls. The seat abutment provides more control over the amount of earthquake force the abutment would resist, but introduces the potential for the superstructure becoming unseated, leading to a collapse of the end span. The superstructure is restrained longitudinally in one direction by the abutment backwall and approach embankment, and transversely by shear keys built into the abutment.

The bridge is supported by two interior pier wall bents (transverse framework used to strengthen the bridge). The two piers to be constructed in the channel would be spaced approximately 75 feet apart to maximize channel width in the Guadalupe River. Additionally, the ends of the pier walls are designed to be rounded to minimize the adverse effects on flow around the structure. Foundations for the seat bridge abutments and piers consist of 12-inch-square 70-ton, 70-foot-long pre-cast driven piles and pile caps. Plate 4 shows a plan and profile of the bridge and a typical pier cross section. The total bridge span from abutment to abutment would be approximately 165 feet.

On the east bank of the channel, a construction access ramp would be constructed. The alignment has the centerline of the new vehicular bridge abutment realigned approximately 20 feet north (downstream) of the original alignment of UPRR Bridge No. 3, and the west bank abutment overlies the location of the former Bridge No. 3. This alignment was made to eliminate having to skew the bridge piers. Conventional at-grade-level pedestrian crosswalks would be completed at the east and west ends of the bridge, which would connect and provide safe public access to the existing sections of the Riverwalk/maintenance road.

Borrow Materials and Sources

Clean borrow material used as fill/backfill, riprap, crushed aggregate would be obtained from nearby commercial sites or other sources determined by the contractor, if necessary. The quality and testing requirements of analyzing borrow material would be provided in the specifications, which is developed later prior to construction.

Approximately 170 cubic yards (cy) of wet excavation is needed to constructing the center two piers and 210 cy of dry excavation for the abutments. Standard riprap gradation is placed for bank slopes up to 2 horizontal to 1 vertical. If necessary, larger stones would be required on steeper slopes.

On both the east and west banks, the total amount excavate for riprap is 641.2 cy. On both sides of the river, the total amount of rock riprap needed as fill to cover an area under the bridge is 1,174 tons, encompassing a total area of 8,000 square feet. The diameter size of the riprap varies between 3.6 inches and 9 inches, while the thickness of the rock riprap ranges between 12 inches minimum to 15 inches maximum. A filter bedding with the gradation would be used. The filter grading is based on a layer thickness of 6 to 9 inches and would be checked for adequate protection against piping of the existing parent soil material into the riprap layer. Fill dirt would be placed on top of the rock riprap and hydroseeded in the fall and spring with native or native hybrid grasses and forbs to minimize the effects to the channel.

Approximately 230 cy of backfill would be needed for the area under the bridge.

Disposal Materials and Sites

If not reusable for re-surfacing the section of the pedestrian trail and landscape area, the excess excavated soil would be disposed at a local landfill or reused at a nearby construction site needing fill.

Pedestrian Path

The removed section of pedestrian path would be re-surfaced and replaced after construction of the vehicular bridge has been completed.

Landscaping and Irrigation

All removed or disturbed landscaping and irrigation on the top of the bank on both sides of the river would be replaced after construction of the vehicular bridge is completed. The same pre-project planting scheme and irrigation design would be used.

Site Restoration

The area outside the channel would be restored to its pre-project condition after construction of the vehicular bridge is completed. Within the channel, the slopes of the banks would be hydroseeded with a native hybrid herbaceous vegetation mix similar to what has been used in the past.

Construction Schedule

Staging of equipment, bore drillings, and site preparation could start as early as May 2008. In-channel construction would start towards the end of May, preferably between June 1 and October 15, to avoid significant adverse effects to Federally listed threatened steelhead and fall-run chinook salmon, a candidate species. The start date for in-water work is based on May 2006 monitoring surveys indicating the presence of out-migrating steelhead smolts in this reach of the river as late as June during those years when there is late storm water runoff from spring rains.

The in-water work at the vehicular bridge site would most likely require one entire construction season. Construction windows and best management practices (BMP's) would be used to reduce and minimize the adverse effects to riparian habitats and critical aquatic habitat for steelhead. Construction in the riparian area of the channel would not start until after the nesting season ending July 31 to avoid adverse effects to nesting migratory birds unless it has been determined by a wildlife biologist that there are no active nests with young found in or near the area under construction.

Construction of the pedestrian trail on the top of the bank would occur between April and November, depending on the weather. This plan includes planting native or ornamental hybrid terrestrial vegetation along the pedestrian trail. The plantings and clean-up of the site would occur in the fall of 2008 (clean up of the channel work would be completed by October 15), but finishing the construction of the bridges, trail work, and terrestrial plantings could resume in the construction windows during the spring or fall of 2009 if unforeseen construction delays occur or the availability of plants or weather conditions prohibit planting in the fall of 2008.

2.3 Alternatives to Replace Lost In-Fill Mitigation

Various alternatives were considered to mitigate for the adverse effects of constructing the vehicular bridge on the infill mitigation plantings completed in December 2007. These included avoidance, onsite mitigation, and offsite mitigation.

2.3.1 Avoidance

To try and avoid the infill mitigation plantings, the Corps and SCVWD considered (1) an alternative bridge design and (2) another location for the proposed vehicular bridge. The alternative vehicular access routes discussed in Sections 2.1.1 could also avoid effects on infill mitigation plantings.

The alternative design considered was a 20-foot raised clear span bridge design without in-water piers. This design without in-water piers would minimize aquatic effects on the Guadalupe River and minimize adverse effects on the SRA cover infill mitigation, assuming that plantings are allowed on the riverbank under the bridge. However, this design was not considered further due to (1) unresolved hydraulic issues related to allowing vegetation under the bridge, (2) construction difficulties tying the longer bridge structure into existing infrastructure adjacent to the bridge site, (3) and higher construction costs (estimates between $10 and $15 million) as compared to the proposed design ($5 million).

Moving the proposed bridge from the UPRR Bridge No. 3 location approximately 150 feet upstream to immediately downstream of the new UPRR Bridge No. 4 was also considered. In addition to avoiding adverse effects on the SRA cover infill mitigation plantings, this alternative would also result in slightly fewer effects on the existing SRA cover since it would overlap a portion of the area evaluated in the 2001 GRR/EIR/SEIS. However, moving the bridge upstream was not considered further due to (1) potential adverse hydraulic effects due to the two sets of bridge piers in close proximity, (2) adverse effects to existing SRA cover, and (3) safety issues related to the UPRR's new bridge.

2.3.2 Onsite Mitigation

To try and identify other potential mitigation sites, the Corps and SCVWD made several site visits along the entire reach of the flood control project in 2007. Both agencies confirmed that there are no open areas that could be planted with native vegetation in the area above or below Segment 3A

The Corps also considered removing existing hardscape in Segment 3A in order to create onsite sites for SRA mitigation. However, this hardscape is required to maintain the integrity and proper functioning of the flood control system on the Guadalupe River. Replacing the hardscape with vegetation could adversely affect the hydraulics of the river by increasing the surface roughness. As a result, this option was not considered further.

2.3.3 Offsite Mitigation

In the apparent absence of potential onsite mitigation areas, two offsite mitigation alternatives were considered. The first was to plant in two openings just upstream of the St. John Bridge on the Guadalupe River and just downstream of the I-880 Freeway crossing. No other openings were found in the area above or below Segment 3A to install mitigation plantings. However, a hydraulic analysis indicated that these plantings would increase the channel roughness and could adversely affect the functioning of the flood control project. As a result, this mitigation option was not considered further.

As a separate and independent project, SCVWD restored approximately 13,000 linear feet of SRA cover and improved aquatic habitat along the lower reach of Guadalupe Creek located approximately 6 miles south of the project area (Plate 5). According to the page 4-33 of the 2001 MMP, "SCVWD would use this mitigation for other projects only if all of the mitigation is not needed for the Guadalupe River Project." At the time, "only about 7,178 linear feet will be

directly counted as mitigation for the flood control project." Subsequent flood control work and field visits have indicated that some of the remaining mitigation credits are needed for compensation at the new vehicular bridge site due to insufficient open areas for planting in Segment 3A.

Currently, there is an excess of approximately 6,000 linear feet mitigation plantings on Guadalupe Creek. Part of these credits would be used to compensate for the loss of the infill mitigation due to construction of the new vehicular bridge project. Excess credits would also be used to compensate for any additional adverse effects of the vehicular bridge project on riparian vegetation in the project area. Approximately 415 linear feet of SRA credits would be used: 300 linear feet for the loss of infill mitigation and 115 linear feet for additional effects on riparian forest.

3.0 AFFECTED RESOURCES AND ENVIRONMENTAL CONSEQUENCES

The affected resources in the UPRR Bridge No. 3 project area were identified in the 2001 final GRR/EIR/SEIS. This EA evaluates the effects of the vehicular bridge project on these resources.

3.1 Resources Not Evaluated in Detail

Based on a preliminary analysis, the vehicular bridge project would have no effects on climate, geology and seismicity, topography and soil types, and environmental justice.

3.1.1 Hydraulics and Geomorphology

The vehicular bridge project would not adversely affect the hydraulics or geomorphology of the Guadalupe River. The former instream bents for the UPRR Bridge No. 3 would be replaced with piers, resulting in a more efficient flow under the bridge. In addition, the vehicular bridge would be designed and constructed so that river geomorphology and hydraulics are not significantly changed as compared to conditions when the railroad bridge was present.

3.1.2 Socioeconomics

Construction of the vehicular bridge project could have short-term effects on any existing utilities in the project area. However, all work would be coordinated with any affected utility companies to ensure that there would be no long-term adverse effects on electric service or water supply to the nearby buildings or business. In addition, any potentially affected users in the area would be kept informed and encouraged to comment. Vehicle access to a new commercial center could also benefit the local economy by providing more opportunities for new businesses and spending.

3.1.3 Hazardous, Toxic, and Radiological Waste

Toxic contamination identified at the UPRR and Sobrato properties during preparation of the 2001 GRR/EIR/SEIS was remediated prior to initiation of construction of the Guadalupe

River Project. Construction of the vehicular bridge would involve use of substances that could be considered hazardous, such as fuels, adhesives, and solvents. To avoid any potential contamination from spills or leaks of these substances, the contractor would follow the regulatory requirements in conjunction with all necessary permits to avoid any adverse effects. The contractor would be required to implement best management practices to avoid, minimize, or clean up any spill or leaks of hazardous or toxic substances.

3.2 Land Use

3.2.1 Existing Conditions

The City of San Jose has jurisdiction over and responsibility for the development of areas adjacent to the Guadalupe River within its urban service area. The Guadalupe River Project is subject to the San Jose General Plan (1994) and amendments, as well as the Guadalupe River Park Master Plan (2002). The San Jose General Plan is currently being updated to incorporate the amendments and changes that have occurred since its adoption and lay out plans for the future (City of San Jose, 2008).

The San Jose General Plan includes policies for parks and recreation, and for trails and pathways (City of San Jose, 1994). In general, these policies are intended to enhance the livability of the urban environment by providing parks and a network of trails and pathways, and by preserving significant natural, historic, scenic, and other open space resources.

The Guadalupe River Park Master Plan was designed to be consistent with the goals of other City and County general plans regarding the provision of public access, the creation of water features, and the development of open space (City of San Jose, et al., 2002). The objectives of the Guadalupe River Park Master Plan include:

- Providing open space along the Guadalupe River for recreation and relaxation of workers and residents in an urban environment.
- Enhancing the Guadalupe River as both a valuable riparian habitat and a natural resource to be enjoyed by the citizens of San Jose and other communities.
- Developing a linear urban park that can provide opportunities for construction of both private and public facilities.
- Using designs and materials that will accommodate flood protection in the Guadalupe River without restricting human access to the river itself.
- Limiting the erection of concrete barriers within the channel and along its banks.

Existing land uses in the nearby surrounding areas between the Coleman Avenue and New Julian Street Bridges include industrial/commercial, offices, an airport approach, and railroad. The land within the project area is classified as public park/open space. There are businesses in the shopping center across the street, but no nearby residences are found within the project area where construction of the vehicular bridge is planned.

3.2.2 Effects

Basis of Significance. An alternative would be considered to have a significant effect if a permanent land use change is not consistent with the City of San Jose's land use zoning and management.

No Action Alternative. This alternative would affect land use in the project area since UPRR would not have vehicular access to their 10-acre parcel at this location. The use of the parcel could remain the same, or UPRR could develop it for another use. No other effects to land use are expected.

New Vehicular Bridge Alternative. This alternative could result in permanent land use changes. The UPRR parcel on the east side of the river could be developed into a commercial center once the new vehicular bridge is constructed. In addition, construction of the bridge would involve permanently clearing 150 feet of river bank on each side of the river. However, neither land use change is considered to be significant because each is consistent with the City's land use zoning and management. In addition, construction of the new vehicular bridge at the UPRR Bridge No. 3 site is consistent with its previous use. No other land use changes are anticipated in the project area.

3.2.3 Mitigation

Since there would be no significant effects on land use, no mitigation would be required.

3.3 Water Quality

3.3.1 Existing Conditions

Water quality in the Guadalupe River is influenced by processes and activities that take place in upstream areas of the watershed. In a natural system, water quality depends primarily on the mineral composition of the rocks in the upper watershed. Farther downstream, water quality is influenced by the mineral characteristics of the materials through which it flows and by contributions from tributaries. In an urban or developed system such as the downtown portion of the Guadalupe River, water quality is affected largely by discharges from point and non-point sources.

The San Francisco Bay Regional Water Quality Control Board (RWQCB) has primary authority for ensuring that water resources are protected from degradation by pollutant discharges. Beneficial uses of the major rivers and groundwater basins, along with narrative and numerical water quality objectives, are established in the water quality control plan (Basin Plan) for the region (San Francisco Bay RWQCB, 1995). Beneficial uses of the Guadalupe River are non-contact water recreation, freshwater habitat that supports warm and coldwater fisheries, and wildlife habitat. The Basin Plan also identifies several potentially beneficial uses, including fish migration, contact water recreation, and fish spawning habitat.

3.3.2 Effects

Basis of Significance. An alternative would be considered to have a significant effect if it substantially degrades water quality for humans, plants, and fish and wildlife.

No Action Alternative. There would be no effects on water quality under this alternative. Water quality conditions in the vehicular bridge project area would be expected to remain the same.

New Vehicular Bridge Alternative. Adverse effects to water quality would occur during in-channel and top-of bank construction activities. The construction footprint associated with the vehicular bridge within the channel and on top of bank is estimated to encompass 0.56 acre. Soil disturbance during ground clearing, dewatering, and construction of the bridge could result in increased sedimentation and turbidity levels in the river. In compliance with the Clean Water Act, the Section 404(b)(1) evaluation is included in Appendix A of this document.

In addition, reduced shade could result in increases in water temperatures downstream in the river. However, loss of shade would be offset by the shade provided by the bridge structure. Any net effect on temperature would be small and would not have a significant effect on juvenile fisheries rearing (Leone, pers comm., 2008).

Under the National Pollutant Discharge Elimination System, described in Section 402 of the Federal CWA, any construction activity disturbing 1 or more acres must comply with the Statewide General Permit, as administered by the State Water Resources Control Board (SWRCB). The General Permit requires elimination or minimization of non-stormwater discharges from construction sites. The vehicular bridge project does not include any non-stormwater discharges, and although it does not affect 1 acre, the project does include work in the stream as part of the larger flood control project. As a result, there is a requirement to prepare a Stormwater Pollution Prevention Plan.

3.3.3 Mitigation

Under Section 401 of the Clean Water Act, the vehicular bridge project is subject to the conditions of certification to be issued by the SWRCB. Similar to what has been used for previous work on the flood control project, numerous BMP's would be implemented to reduce the adverse effects to water quality. These BMP's are listed in the RWQCB's 2001 Order and August 2, 2005, letter of approval, for the flood control project. Implementation of these types of BMP's would reduce any adverse effects to less than significant.

- Erosion control and sediment detention devices such as using straw bales, fencing, sandbags, and/or similar devices would be incorporated into the project and implemented at the time of the project action. These devices would be in place during the project action, and after if necessary, for the purpose of minimizing fine sediment/water slurry input to flowing water. The devices would be placed at all locations where the likelihood of sediment input exists.

- The contractor would prepare and implement an (1) Erosion and Sediment Control Plan for minimizing the potential for sediment input into the stream, (2) a Toxic Material

Control and Spill Response Plan for preventing toxic material spills, (3) a Soil Management Plan that provides criteria for classifying wastes in soil and managing soils possibly contaminated with mercury, and (4) a Hazardous and Toxic Materials Contingency Plan in the event that unlisted hazardous and toxic sites are uncovered during construction.

- The contractor would fully cooperate with State and Federal agencies involved with mercury contamination issues to ensure that the vehicular bridge project including mitigation is compatible and conducted in a cooperative manner with potential mercury contamination cleanup actions.

- Dewatering of work areas would be conducted in accordance with all regulatory requirements to avoid or minimize any effects on water quality.

- All pilings, support piers, abutments, and rock materials would be non-toxic. Any combination of wood, plastic, concrete, or steel is acceptable, provided that there are no toxic coatings, chemical anti-fouling products, or other treatments that could leach into the surrounding environment.

3.4 Vegetation

In compliance with the Fish and Wildlife Coordination Act, the USFWS prepared a draft Coordination Act Report on the effects of the project on environmental resources (Appendix B).

3.4.1 Existing Conditions

The construction footprint for the vehicular bridge project includes the Guadalupe River, adjacent riverbanks from the edge of the low-flow channel bank to the top of bank, and portions of the adjacent upland terrace. The following sections summarize the vegetation types in the project area. They are described in detail in the 2001 GRR/EIR/SEIS.

Riparian Vegetation. Riparian habitat in the project area has been classified as great valley mixed riparian forest (Holland, 1986), which consists of a tall, dense, winter-deciduous broadleaf forest on both sides of the river. There is a relatively narrow corridor of riparian forest on the banks of the Guadalupe River along Segment 3A. Located in the highly urbanized area of downtown San Jose, the riparian forest continues to provide important habitat for wildlife. At the vehicular bridge site, there is no riparian vegetation growing in the area above the top of the bank. Nonnative vegetation has been planted along the pedestrian trail. The typical width of the riparian corridor ranges between approximately 100 and 200 feet.

Shaded Riverine Aquatic Cover Vegetation. SRA habitat is the near-shore overhead and instream aquatic cover that grows at the interface between the river and adjacent shoreline riparian habitat. There is a corridor of SRA cover along the river in the project area. This cover provides important shading, contributes leaf litter and insects to the stream, and provides submerged habitat for aquatic species. The area of SRA cover vegetation is determined by

multiplying the stream length in feet by 15 feet, assumed to be the width of the SRA cover zone per the USFWS.

Other Vegetation Types. A wetland delineation conducted in April 2000, based on the Corps 1987 wetland delineation manual, concluded that no wetlands are present in Segment 3A (Environmental Laboratory, 1987). Other waters of the U.S. include open water channel. No vegetation was classified as upland vegetation in Segment 3A (Corps, 1992).

3.4.2 Effects

Basis of Significance. An alternative would be considered to have a significant effect on vegetation if it would result in the loss or degradation of a significant quantity of native vegetation, especially riparian, resulting substantially diminishing the quality of the habitat for plants.

No Action Alternative. Under this alternative**,** there would be no effects to the existing SRA cover mitigation plantings consisting of native riparian shrubs and trees.

New Vehicular Bridge Alternative. Construction of the vehicular bridge project and the City's requirement to maintain a no brush/tree clear zone of 50 feet both upstream and downstream of the bridge would result in the permanent loss of 300 linear feet (0.10 acre) of the SRA cover mitigation planted in December 2007 as part of the flood control project, and 0.41 acre of mixed riparian forest habitat that grows above the SRA zone. This loss of 0.51 acre of habitat would reduce the amount of high quality habitat that supports various resident and migratory wildlife species. Best management practices such as fencing would be implemented by the contractor to protect the nearby native vegetation found growing just outside the footprint of the vehicular bridge.

3.4.3 Mitigation

The SCVWD restored approximately 13,000 linear feet of SRA cover and improved aquatic habitat along the lower reach of Guadalupe Creek upstream in the watershed. According to the page 4-33 of the 2001 MMP, "SCVWD would use this mitigation for other projects only if all of the mitigation is not needed for the Guadalupe River Project." At the time, "only about 7,178 linear feet will be directly counted as mitigation for the flood control project." Field visits in 2007 have indicated that some of the remaining mitigation credits are needed for compensation at the new vehicular bridge site due to insufficient open areas for planting in Segment 3A.

Currently, there is an excess of approximately 6,000 linear feet mitigation plantings on Guadalupe Creek. Part of these credits would be used to compensate for the loss of 300 linear feet (0.10 acre) of the infill mitigation due to construction of the new vehicular bridge project. Excess credits would also be used to compensate for additional adverse effects of the vehicular bridge project on 0.41 acre (1,230 linear feet) of riparian vegetation above the SRA zone in the project area. A total of 1,530 linear feet of SRA credits would be used: 300 linear feet for the loss of infill mitigation and 1,230 linear feet for additional effects on riparian forest.

3.5 Wildlife

3.5.1 Existing Conditions

The riparian corridor along the Guadalupe River at Segment 3A is narrow and discontinuous, and is disturbed from its natural historic condition since it is constrained by adjacent land uses on both sides. The land surrounding the river has been developed into residential, commercial, and light industrial areas. Riparian habitat in the project area supports diverse populations of wildlife species in the following ways:

- Provides refuge for wildlife species in an urban environment.
- Supports migratory neo-tropical songbirds not found in adjacent areas.
- Provides a movement corridor for such wildlife as small mammals, amphibians, and resident birds between San Francisco Bay, the Santa Clara Valley floor, and foothill habitats.
- Adds to the total amount of habitat in the local environment with value to wildlife.
- Contributes to maintaining a range of wildlife species in adjacent habitats, including urban areas.

Riparian habitat is considered to be among the most productive vegetation types for supporting wildlife in California, and riparian forests support the most dense and diverse wildlife communities in the Santa Clara Valley. Riparian habitats often contain special ecological features that are not found in upland areas (Brinson et al., 1981). The availability of water, the diversity and abundance of plant life, and the complex vegetation structure provide a variety of wildlife species with food and cover, as well as breeding, resting, and hiding sites. The abundance of wildlife species is generally greater in riparian habitats than in adjacent habitats because of the juxtaposition of aquatic and terrestrial habitats and the high proportion of habitat edges where different vegetation types meet. Wildlife typically use the habitat edges for foraging and cover. Additionally, riparian corridors are important for wildlife movement.

Riparian habitat in Segment 3A is generally a narrow corridor. The existing riparian corridor is interrupted by road and railroad bridges and pedestrian trails. Historically, mammals that inhabited the project area used a continuous corridor from one habitat area to another. Currently, the remnant populations of wildlife found in the project area require small home ranges and have some tolerance of human activity and urbanization. These mammals include Virginia opossum, raccoon, striped skunk, Trowbridge shrew, broad-footed mole, fox squirrel, Botta's pocket gopher, and feral cat. Mammals, such as coyote and bobcat, which use riparian habitats and also require large home ranges and migration corridors, have been extirpated from the downtown portion of the Guadalupe River. Riparian habitat supports aquatic and terrestrial invertebrates that are prey for amphibians, reptiles, small mammals, and insectivorous birds. Urban streams, such as the Guadalupe River, support few amphibian and reptile species because urbanization has reduced the quantity and quality of habitats needed to support larger populations. Common amphibian species found in the project area include Pacific treefrog, western toad, and bullfrog.

Bird species occurring and nesting in the project area include mourning dove, belted kingfisher, and various songbirds such as black phoebe, yellow warbler, lesser goldfinch, and California towhee. Other birds likely to occur in the project area include California quail, red-tailed hawk, red-shouldered hawk, American robin, scrub jay, yellow-rumped warbler, and ruby-crowned kinglet.

3.5.2 Effects

Basis of Significance. An alternative would be considered to have a significant effect on wildlife if it would result in the loss of a substantial quantity of the species' habitat, especially riparian, resulting in the loss of resident or migratory wildlife species along the Guadalupe River.

No Action Alternative. This alternative would have no adverse effects on existing habitat for any wildlife species. The existing habitat conditions would become a mature riparian forest as the SRA mitigation plantings mature.

New Vehicular Bridge Alternative. Construction of the vehicular bridge and the City's requirement to maintain a no brush/tree clear zone of 50 feet both upstream and downstream of the bridge would result in the permanent loss of 300 linear feet (0.10 acre) of the SRA cover mitigation planted in December 2007 as part of the flood control project, and 0.41 acre (1,230 linear feet) of mixed riparian forest habitat that grows above the SRA zone. Loss of this habitat would reduce the amount of high quality habitat that supports various resident wildlife species dependent on this area for food, cover, and breeding and rearing of young; and for those species that use the habitat for resting, foraging, and cover during their migration between the fall and spring months.

In addition, construction activities could adversely affect any nesting birds or mammals in or near the project area. Peak nesting and rearing of young typically starts in April and May for most avian species and other wildlife species, and extends through July. For about 5 months (period of breeding and raising young during the spring and summer), construction activities could result in adverse effects to resident and seasonal wildlife species due to disturbance to the soils where ground dwelling species live, disturbance to the nearby existing vegetation, and noise and human disturbance from construction activities. As a consequence, effects to wildlife could result in their temporary dispersal, avoidance of the area, or limiting their daily or seasonal use during non-construction periods early in the morning or at the end of the day after construction stops.

3.5.3 Mitigation

The vehicular bridge project would be constructed in areas adjacent to and within suitable riparian habitat that would be used by resident and migratory birds. During the construction period, these birds could use the project area during the summer and fall months for one or more life history requirements needed such as resting, foraging, cover, and water. As identified as a conservation measure by the resource agencies in the February 2001 GRR/EIR/SEIS, a measure that would be implemented that avoids adverse effects to nesting birds is that construction would not start until August 1. Project construction activities would include instructions that workers

are to not pursue, hunt, attempt to take, kill, capture, collect, possess, or offer for sale any migratory bird, including feathers, parts, nests, or eggs. No other mitigation is required since construction is done outside the nesting season where no births and rearing of young is expected and any temporary effects to vegetation and wildlife is reduced to less than significant levels with the selection of the construction season to occur when there is no nest with young.

Mitigation to compensate for the adverse effects on the permanent loss of riparian habitat supporting wildlife is fully discussed in Section 3.4.3. In addition to a soil management plan as mentioned earlier in this report preventing erosion effects to riparian vegetation that provides valuable habitat for wildlife, the Contractor would be required to include the use of State and Federal approved BMP's such as vegetative fencing to protect and avoid adverse effects to the existing riparian willow scrub vegetation found growing next to the construction limits boundary and use noise reduction devises on equipment to minimize the short-term effects to wildlife using the area. After the vehicular bridge and other features are constructed and completed in the Fall 2008, the slope would be re-contoured to its existing condition and re-seeded with a native grasses and forbs mix to be approved by the resource agencies.

3.6 Threatened and Endangered Species

3.6.1 Existing Conditions

On March 13, 2008, the USFWS provided a list of federal threatened and endangered species with the potential to occur in the project area (see Appendix C). The 2008 list includes 10 wildlife species and one critical habitat that are Federally listed as threatened or endangered. These species include the Bay checkerspot butterfly, delta smelt, Central California Coastal steelhead, Central Valley steelhead, critical habitat for Central California coastal steelhead, Central Valley spring-run chinook salmon, winter-run chinook salmon, California tiger salamander, California red-legged frog, California clapper rail, and California least tern.

Of these 10 species, only the threatened California red-legged frog (*Rana aurora draytonii*), and the threatened steelhead trout (*Oncorhynchus mykiss*) and its critical habitat have the potential to occur in the project area. Based on the 2001 GRR/EIR/SEIS and recent field visits, there is no suitable habitat or known occurrences in the project area for the remaining species on the list. As a result, they are not discussed further in this EA.

Red-Legged Frog

According to the USFWS list, the red-legged frog has the potential to occur in the project area. This frog occupies a fairly distinct habitat, combining both specific aquatic and riparian components. The adult frog requires dense or shrubby riparian or emergent vegetation, such as cattail and tule marsh, that is closely associated with water that is both deep (more than 2 feet) and either still or slow-moving. The breeding season is in the rainy months, usually from November through March (Stebbins, 1985).

Habitat necessary for estivation (reduced activity during late summer and early fall) is essential for the survival of red-legged frogs in a watershed. These frogs estivate in small mammal burrows and moist leaf litter (Jennings and Hayes, 1985). The availability of estivation habitat and the ability to access such habitat may be limiting factors in population numbers and survival. Historically, red-legged frogs ranged from northern California to Baja California and west of the Cascade-Sierra crest. This range included the Guadalupe River watershed.

In April 1997, the Corps conducted day surveys in Segment 3A using USFWS red-legged frog survey protocol (dated February 18, 1997). No red-legged frog larvae, metamorphs, juveniles, or adults were observed (JSA, 1997). The surveys revealed the following factors in Segment 3A that contribute to poor habitat for this frog: presence of predatory species (bullfrogs, largemouth bass, and green sunfish), potentially poor water quality caused by water pollution and storm runoff, and the extent and close proximity of urban development. As a result, the red-legged frog would not be expected to occur in Segment A.

Steelhead and Chinook Salmon

The listed steelhead trout and the non-listed Central Valley fall chinook salmon are known to occur in the project area. The Central California Coast steelhead evolutionarily significant unit (ESU) has been listed as threatened under the ESA (62 FR 159, August 18, 1997), and the Guadalupe River and its tributaries are designated as critical habitat for the Central California Coast steelhead ESU (65 FR 7764, February 16, 2000).

NMFS considers the chinook salmon in the Guadalupe River to be part of the Central Valley fall and late-fall run chinook salmon ESU. NMFS has determined that the Central Valley fall and late-fall run chinook salmon ESU does not warrant listing, but the ESU is considered a candidate species (64 FR 50394, September 16, 1999). In addition, the Guadalupe River and its lower tributaries are considered essential fish habitat for chinook salmon. The Magnuson-Stevens Act, as amended by the Sustainable Fisheries Act of 1996 (Public Law 104-267), defines essential fish habitat as waters and substrate necessary for fish to spawn, breed, feed, and grow to maturity.

Steelhead

Adult steelhead trout typically begin their migratory runs up the Guadalupe River during November through April (Shapovalov and Taft, 1954). Spawning could occur during January through May. Due to water temperature constraints, spawning is most likely to occur before

April in much of the Guadalupe River system. Eggs hatch during March through early June. Juvenile steelhead trout typically remain in freshwater for a minimum of 1 year and begin to migrate out to the ocean as smolts from November to May. Smolts are juvenile fish that migrate downstream and undergo the physiological changes that enable them to survive in saltwater. The periods with the greatest likely potential occurrence of the steelhead and salmon life stages are shown below:

Steelhead	
Juvenile	Oct 1 – Sept 30
Migratory adults	Dec 15 – Apr 31
Chinook salmon	
Juvenile	Jan 1 – May 31
Migratory adult	Oct 15 – Jan 15
	June 15 – Oct 15 (period of potential occurrence)

Historically, adult and juvenile steelheads were found in the Guadalupe River and inhabited other sections of the system (Skinner, 1962). However, there is no available data that provide an historical or present-day estimate of the population of adults returning to the river during the annual migration. The completion of Almaden and Guadalupe Reservoirs in the mid-1930s and Lexington Reservoir in 1952 restricted steelhead to tributary streams downstream from the dams. These reservoirs forced steelhead entering the Guadalupe River system to spawn primarily in the lower reaches of the Guadalupe River and in Los Gatos and Ross Creeks. Adult steelheads were observed below the Alamitos drop structure downstream from Almaden Reservoir in February 1994 (SCVWD and Corps, 1998) and as recently as February 1999.

While conducting fish monitoring surveys between 2004 and 2006 where captured juvenile fish were recorded, a total of 158 juvenile steelheads were captured by the SCVWD and the Corps for the Guadalupe River Project (Downtown). Sampling included 20 index reaches (100-foot stream length) in the Guadalupe system. Of the sites, 12 occur in the Guadalupe River, and 8 in Guadalupe Creek. Of the 158 juveniles captured, 118 were captured on Guadalupe Creek and 40 on Guadalupe River. The sampling occurred at the end of the summer rearing period (September-October) and the surveys are intended to confirm the presence/absence, distribution, and give a relative comparison of abundance in the reaches between the different years. Three years of data support the opinion that juvenile salmonids rear in Segment 3A of the Guadalupe River between New Julian and Airport Parkway. Specifically, the pool/riffle sites between Coleman Avenue and Old Julian have yielded juveniles in 2004 and in 2006 in the area immediately downstream of Old Julian Street Bridge (Nishijima, 2006).

Chinook Salmon

Chinook salmon currently migrate up the Guadalupe River and, to a lesser extent, Los Gatos Creek to spawn. Adult chinook salmon could enter the Guadalupe River from August through December, but most adults arrive from September through November. The salmon spawn from October through December in the river reaches above the influence of tidewater to downstream from the Alamitos drop structure. A fish ladder completed in 1999 provides

chinook salmon access to stream reaches above Almaden Lake. The majority of chinook salmon spawn in and around the downtown San Jose area. Eggs hatch after about 2 months, and the young remain in the gravel for several weeks before emerging as fry (Raleigh et al., 1984). Juveniles may be present in the river from January through June, but most outmigrate a month or two after emergence.

3.6.2 Effects

Basis of Significance. An alternative would be considered to have a significant effect on special status species if it would result in the take of a Federally listed threatened or endangered species, adversely affect designated critical habitat, or substantially affect any other sensitive species, including degradation of its habitat.

No Action Alternative. There would be no adverse effects to Federally listed steelhead under this alternative.

New Vehicular Bridge Alternative. The construction of the vehicular bridge and the City's requirement to maintain a no brush/tree clear zone of 50 feet in both directions of the bridge would result in the permanent loss of 300 linear feet (0.10 acre) of the SRA cover planted in December 2007 as part of the flood control project. This loss would reduce future organic input from the mature overhanging vegetation along the river. However, this loss would be offset by maturity of SRA cover restored in other areas of the watershed by SCVWD and other agencies.

In addition, reduced shade due to loss of future overhanging vegetation could result in increases in water temperatures downstream in the river. However, loss of shade would be offset by the shade provided by the bridge structure. Any net effect on temperature would be small and would not have a significant effect on juvenile fisheries rearing (Leone, pers comm., 2008).

The Corps is preparing a Biological Assessment to be submitted to the NMFS, requesting reinitiation of formal Section 7 consultation and preparation of a BO on the effects of the vehicular bridge project on the Federally listed steelhead. Section 7 consultation with NMFS will be completed prior to finalizing the EA.

3.6.3 Mitigation

Mitigation to compensate for the adverse effects on SRA cover supporting the listed steelhead and candidate fall-run chinook is discussed in Section 3.4.3. Limiting the construction season from June 1 through October 15 would reduce adverse effects on adult and juvenile steelhead and chinook salmon.

Similar to what has been used in the past for the Guadalupe River Flood Control Project, numerous NMFS' Terms and Conditions, including those listed below, would be implemented to reduce the adverse effects to special status species. In addition, the BMP's used to address water quality effects would benefit these fish and their migratory, rearing, and spawning habitats in the lower portion of the Guadalupe River. The use of BMP's and implementing NMFS's Terms

and Conditions would reduce and minimize the adverse effects to listed fisheries to less than significant.

- The contractor would retain a fisheries biologist with expertise in the areas of resident or anadromous salmonid biology and ecology, fish/habitat relationships, and biological monitoring; and handling, collecting, and relocating salmonid species. The biologist would monitor activities prior to, and during in-channel activities especially during temporary redirection of the flow of water via cofferdams. If the contractor's Fish Management Plan includes electroshocking methods to capture stranded fish, the fisheries biologist would have experience with electroshocking methods and use up-to-date electroshocking equipment. Water temperatures would be collected during periods of dewatering of the channel.

- The biologist would monitor placement and removal of channel diversions for the purpose of removing any steelhead that would be adversely affected. The biologist would capture such steelhead and individuals stranded in residual wetted areas as a result of streamflow diversion and workspace de-watering, and relocate the individuals to a suitable instream location immediately upstream or downstream of the particular project area. One or more of the following methods could be used to capture steelhead: dip net, seine, throw net, minnow trap, and hand electroshocking could only be used if NMFS has reviewed the biologist's qualifications and given approval. The biologist would note the number of individual steelhead and chinook salmon observed in the affected area, the numbers of individuals relocated, and the date and time of the collection and relocation.

- The biologist would monitor in channel activities, instream habitat, and performance of sediment control/detention devices for the purpose of identifying and reconciling any condition that could adversely affect steelhead or their habitat. On the advice of the biologist, the COR would direct the contractor to cease work until the adverse condition can be corrected. The contractor, upon notification from the biologist, would halt the work activity causing the condition affecting steelhead and recommend measures for avoiding the condition. Work could resume when NMFS agrees that the proposed measures are appropriate for avoiding the condition.

- The biologist would contact NMFS (707-575-6050) immediately if one or more steelhead or chinook salmon were found dead or injured. The purpose of the contact would be to review the activities resulting in take and to determine if additional protective measures are required. Other non-emergency coordination with NMFS would occur through the COR.

- Implement adequate control measures to avoid or minimize sediment, turbidity, and pollutant inputs to the Guadalupe River.

3.7 Fisheries

Key factors that affect fish populations, their distribution, and their aquatic and riparian habitats in the Guadalupe River include various environmental factors such as hydrologic and hydraulic conditions, channel erosion and deposition, river geomorphology, water temperature, SRA cover vegetation, suspended solids and toxic constituents, and species inter- and intra-competition.

3.7.1 Existing Conditions

Although aquatic and riparian conditions are not optimal, sections of the Guadalupe River and its lower tributaries support anadromous and resident fish species typical of coastal and Bay Area streams (Corps, 2001). Anadromous species are fish that mature in the ocean and migrate to freshwater to spawn. Juvenile anadromous fish spend variable periods in freshwater before migrating to the ocean. Anadromous species found in the Guadalupe River include chinook salmon, steelhead/rainbow trout, and Pacific lamprey. Anadromous fish are found primarily in the main stem of the Guadalupe River because dams and other channel structures block or impede access to tributary streams. The effects evaluation and analysis to Federally and State-listed steelhead and salmon that are listed as threatened and candidate species, respectively, are previously discussed in the Section 3.6, Threatened and Endangered Species.

Resident species are fish that spend their entire lives in freshwater. The Guadalupe River and its tributaries support both native and introduced resident species. Native resident species include Sacramento sucker, California roach, hitch, prickly sculpin, and riffle sculpin. Introduced resident species include largemouth bass, green sunfish, goldfish, carp, mosquitofish, brown bullhead, and pumpkinseed (SCVWD and Corps, 1998).

Resident rainbow trout inhabit sections of the Guadalupe River and its tributaries year-round. The period that adult Pacific lamprey migrate upstream to spawn is from April through July. After hatching, larval lamprey burrow into sand and mud substrates. The larvae mature into juvenile lamprey and spend 3 to 7 years in stream habitat before migrating to the ocean.

3.7.2 Effects

Basis of Significance. An alternative would be considered to have a significant effect on fisheries if it would result in the degradation of a significant quantity of habitat, resulting in reductions in fish activity and use in the Guadalupe River.

No Action Alternative. There would be no effects to fisheries under this alternative.

New Vehicular Bridge Alternative. In-stream channel work would increase sediment and turbidity at the proposed bridge site, and increase sediment and turbidity flowing to downstream areas. This would adversely affect the aquatic environment and substrate of the riverbed; and while working in the dry section of the channel that supports riparian habitat for the salmonid

fisheries. In the short-term, constructing temporary cofferdams, dewatering, and constructing the two pier bents in the stream would adversely affect the aquatic environment. In the area of construction and extending downstream, increased levels of sedimentation and turbidity are expected to irritate the gills of fish, and their resting habitat, breathing, and spawning, and rearing areas of juveniles. The long-term effects of soil compaction, replacement of rock riprap, and pouring cement to form the bridge abutments and pile caps in the channel would result in compaction of the substrate in the area where the piers are placed and where concrete is placed in the stream; and the permanent removal of SRA cover vegetation providing high quality habitat for the fisheries.

3.7.3 Mitigation

The implementation of the BMP's and NMFS's Terms and Conditions listed in Sections 3.3.3 and 3.6.3, respectively, would also reduce and minimize the adverse effects to fisheries to less than significant.

3.8 Recreation

3.8.1 Existing Conditions

In downtown San Jose, the Guadalupe River offers surrounding residents and businesses an open-space corridor of riparian vegetation and a system of constructed trails, informal pathways, and informal neighborhood open-space areas. The project area overlaps the Guadalupe River Park, which would be completed when the flood protection project has been completed. The riparian corridor is accessible to the public by constructed trails and by informal pathways. In some areas, informal pathways also support recreational use; in other areas, parking lots, buildings, and riparian vegetation limit travel along the river. In areas outside the project area, the river accommodates activities that depend on water, such as fishing and recreational boating. In areas within the project limits of the vehicular bridge, there are only activities that are enhanced by water, such as walking, jogging, bicycling, and nature viewing.

Although there are no boat launch ramps, limited recreational boating occurs on the Guadalupe River. During moderate to high flows, the river is navigable by small watercraft, such as canoes and kayaks, from the dam above Blossom Hill Road to its mouth at Alviso (Western Water Canoe Club, 1997). Boating opportunities are limited during low-flow conditions from May to November. Pre-flood control project facilities that restrict watercraft passage during low-flow conditions include the natural gas and sewer pipelines that cross the river near St. John Street Bridge. Within Guadalupe River Park, city policy prohibits boats longer than 16 feet, windsurfers, surfboards, air mattresses, and inner tubes (City of San Jose, 1996).

Some fishing also occurs on the Guadalupe River in the downtown area. The City generally discourages human consumption of fish caught in the Guadalupe River and other area streams because the fish may contain trace amounts of heavy metals. Signs warning the public not to eat fish caught in the area are posted throughout Guadalupe River Park. Fishing use of the Guadalupe River probably totals no more than about 60 visits per year (Helmke, pers. comm.).

Other recreational opportunities along the river include nature viewing and walking. Recreational use along Segments 1 and 2 has been enhanced by the construction of trails and stairways. By contrast, a lack of formal trails limits the travel of recreational users along Segments 3A and 3B. The Guadalupe River Park Master Plan (1989), described previously in this document in Section 1.1, "Plans and Policies," encompasses plans for several recreational facilities in Segments 3A and 3B, including a Riverwalk, additional trail access, and natural habitat; however, construction of all of these facilities have not yet been completed. On the west bank of the river, the pedestrian trail is intact in the area of construction work and it is used daily by different users such as, bicyclists, joggers, and walkers. The trail on the east bank is not yet connected with a section of it on the south side of the west bank not currently being used by people since it is fenced off. The only section of the trail on the west bank that is complete and being used is on the north side of the proposed bridge. It is this section of trail that would be affected by construction activities associated with the new bridge.

3.8.2 Effects

Basis of Significance. An alternative would be considered to have a significant effect on recreation if it would result in the significant loss of recreational facilities, cause a substantial disruption in a recreational activity or opportunity, or substantially diminish the quality of the recreational experience.

No Action Alternative. Under this alternative, there would be no effects to recreation.

New Vehicular Bridge Alternative. The effects from construction activities include the temporary demolishing and removal of a total of about 50 feet on the west side (there is no trail on the south side of where the edge of the bridge would be placed) and 150 feet on the east side of the existing pedestrian trail), which would result in temporary adverse effects to recreational use of the trail by pedestrians, handicapped, bicyclists, wildlife viewers, and joggers. The effects are short term, and it would not be permanent since there are immediate plans to re-construct the affected portion of the trail on each side of the top of bank in the Fall after bridge construction activities are completed.

3.8.3 Mitigation

Due to the area being designated and remaining as a Parkway and the beneficial nature of the project consisting of access to the recreational trail resulting in long-term recreational benefits to the local businesses and residences of the City of San Jose and the local community, no mitigation is required for short-term, temporary effects to recreation. Best management practices used to minimize the effects of constructing the vehicular bridge consist of the City temporarily creating a temporary detour for the pedestrian trail on the east bank and placing warning signs that would minimize the short-term effects to recreational use of the trail. With no contiguous trail, there is no need to mitigate for effects on the west bank since the section of the trail that is demolished is not currently used by pedestrian and would be replaced with a new section after bridge construction activities are completed. The connection of the pedestrian trail

from one side of the road to the other would be completed at a later date once construction of the vehicular bridge is done.

3.9 Esthetic Resources

3.9.1 Existing Conditions

The Guadalupe River provides a distinct band of vegetation through densely urbanized portions of downtown San Jose. The vegetation serves as a visual focal point; residents consider the natural riparian greenbelt along the river an attractive amenity that helps to offset the impacts of urbanization on the area's visual/esthetic quality. Due to the river's channelization and its urban setting, as well as limitations on river access, the full length of the river is visible only from area skyscrapers and from the air.

Esthetic resources are those natural resources, landforms, vegetation, and manmade structures in the environment that generate one or more sensory actions and evaluations by the viewer. As seen from Highway 87, the elevated section of the highway provides views of the surrounding foothills on the perimeters of east San Jose, Almaden (looking to the south), and Los Gatos, Saratoga, and Monte Sereno (looking to the west). The area surrounding the public roadways includes ornamental shrubs and trees and weedy vegetation. The existing conditions of the esthetic resources at the project area consist of the Guadalupe River and narrow band of individual trees and shrubs consisting of native riparian vegetation, non-native shrubs and trees, and ruderal grassland. The natural landscape includes foothills as a backdrop and wide expanses of sky.

3.9.2 Effects

Basis of Significance. An alternative would be considered to have a significant effect on esthetics if changes in landform, vegetation, or structural features create substantially increased levels of visual contrast as compared to surrounding conditions.

No Action Alternative. This alternative would have no effects on existing esthetics in the project area. The regional and local viewshed would be expected to remain the same.

New Vehicular Bridge Alternative. This alternative would have adverse effects with the removal of riparian vegetation and ruderal grasses, but not at a significant level, on existing esthetics in the project area. It is not significant since only about 300 linear feet (0.10 acre) of mitigation plantings would be affected. This alternative plan would result in a temporary short term, affect on the esthetic resources in the project area during construction of the vehicular bridge. On top of bank, any ornamental plants growing along the pedestrian trail and removed during the construction of the bridge would be revegetated upon completion of the bridge with the same plant varieties originally planted. These effects would also include disturbance of the existing viewshed by using construction equipment and activities on the commercial business in the west side of the construction area. There are no businesses in the immediate area on the east side of the river. Although short term, this disturbance could be considered by some viewers to be a source of visual pollution. However, the project would not result in any long-term changes

in the esthetics of the area. In the long term, the off-site mitigation plantings for the vehicular bridge project would provide some benefits that increase the esthetics of other degraded areas.

3.9.3 Mitigation

Due to the nature of the larger flood control project that avoids significant effects to aquatic and riparian habitats, the esthetics would not be significantly affected in the vehicular bridge area. As described earlier in the Construction Details Section, as much as possible of the pedestrian trail that is constructed and planted on top of bank provides its user to observe the esthetic values of the river and its associated riparian habitat. No mitigation to esthetics and recreation is required, since the section of the trail and upland vegetation disturbed and temporarily removed would be replaced after construction of the vehicular bridge has been completed.

3.10 Traffic

3.10.1 Existing Conditions

The project area for the evaluation of traffic is the existing road network in the vicinity of Segments 1, 2, and 3; Reach A; including roads that would be traveled by haul trucks during project construction. This section also provides information on existing traffic volume on affected roads. Segments 1, 2, and 3, and Reach A are located on the northwest edge of downtown San Jose, southwest of San Jose International Airport. Major surface streets in the project area include Santa Clara Avenue, New Julian Street, Old Julian Street, St. John Street, Coleman Avenue, Park Avenue, and Woz Way. Old Julian Street bridge has been removed. The most recent San Jose General Plan includes a list of streets designated as major collectors for the year 2020. Julian Street and Santa Clara Street, which are both crossed by the proposed bypass system, are classified as arterials in the San Jose General Plan (City of San Jose, 1994). Freeways that traverse the area include I-880, I-280, and State Route 87, currently being upgraded to freeway standards. Table 2 gives traffic volumes for major roads that could be used as haul routes.

Material excavated from Segment 3 and the bypass would likely be hauled to disposal sites on Zanker Road or some other local site. To reach the Zanker Road disposal site, trucks would travel on New Julian Street to the Guadalupe Parkway, north to Hedding Street, east to North First Street, north to I-880, north on I-880 to State Route 237, and then west to Zanker Road and the disposal site.

3.10.2 Effects

Basis of Significance. An alternative would be considered to have a significant effect on traffic if changes in traffic patterns create substantially increased levels of congestion or traffic delays as compared to existing conditions.

No Action Alternative. There are no effects to traffic under this alternative, and conditions are expected to remain about the same. Maintenance, public, and private vehicles would have to continue using Coleman Avenue or New Julian Street to go from one side of the river to another.

Table 2. Estimated Daily Traffic Volumes on Roadways near the Vehicular Bridge Project

Roadway	Estimated Traffic Volume
I-880 from North 1st Street to State Route 237	122,000
I-880 from State Route 237 to Dixon Landing Road	146,000
State Route 237	88,000
State Route 87	20,000
Guadalupe Parkway	66,000
Almaden Expressway	72,400
Coleman Avenue	153,000
Dixon Landing Road	15,330
Hedding Street	11,000
New Julian Street	12,000
North First Street	31,300
St. John Street	5,000
West Santa Clara Street	24,000
Zanker Road	3,800
Source: City of San Jose, 1998.	

New Vehicular Bridge Alternative. The vehicular bridge would have short-term effects to local street traffic when equipment is mobilized and de-mobilized, with increased traffic from construction workers coming to and leaving the site, and from increased traffic during hauling periods of materials and debris. The effects to traffic are expected over a 6-month period at those times during construction activities in the late spring, summer, and late fall/early winter.

3.10.3 Mitigation

Effects to traffic are expected to be short duration in the late spring, summer, and fall months. No mitigation is required since the Contractor would be required to implement BMP's to reduce the effects to less than significant levels. The contractor would be required to obtain a

traffic permit from the Santa Clara County Public Works/Engineering Division. This would be required prior to initiation of construction. The permit would include specific terms and conditions that would be implemented during construction to comply with all County standards and specifications, avoid significant adverse effects on traffic, and ensure public safety. To minimize the effects on traffic, the construction access entrance at Autumn and Santa Teresa Streets would be the main road used.

Throughout progress of work, the BMP's include the following requirements by the Contract:

- Not interfere with use of or access to adjacent buildings or property.

- Do not close or otherwise obstruct sidewalks or streets without obtaining and paying for encroachment permits from the City.
- In necessary, move and relocate traffic signs and signals, controls, power and light poles, and similar utility and public service items obstructed by project barricades and operations.
- Maintain accessibility from street at all times to fire hydrants within the construction area.
- Construction period for trucks hauling fill materials would be restricted to non-peak hours to minimize effects to rush hour traffic.
- Vehicle (wheels in particular) would be cleaned before leaving site as to minimize effects on City streets.
- Clean and sweep all streets muddied, soiled, or littered owing to construction activity during the work week to the satisfaction of the City.
- Repair any damages to the road caused by construction activities.
- As much as possible, limit the construction access to less used streets with lower traffic volumes such as Santa Teresa, Cinnabar, and Autumn Streets.
- The Contractor would be required to prepare a traffic management plan includes BMP's such as flagmen, warning signs, or install a barrier to prevent any adverse effects to traffic and pedestrian use on the access roads leading to and from the construction site.

3.11 Air Quality

3.11.1 Existing Conditions

This section describes the applicable Federal and State ambient air quality standards, existing air quality conditions, and applicable air quality management programs. Because most potential effects of the Bypass System Alternative or Refined Bypass System Alternative would occur in San Jose, the project area falls within the Santa Clara Valley portion of the San Francisco Bay Area Air Basin (SFBAAB).

Federal and State Ambient Air Quality Standards

Both the Federal Government and the State of California have established air quality standards for ambient concentrations of several key pollutants. For some pollutants, separate standards have been set for different time periods. Most standards were set to protect public

health; however, for some pollutants, standards were based on other values, such as protection of crops, protection of materials, or avoidance of nuisance conditions. National Ambient Air Quality Standards (NAAQS) for nitrogen dioxide (NO_2), sulfur dioxide (SO_2), carbon monoxide (CO), and PM_{10} specify short-term (less than 24 hours) concentrations that could be exceeded no more than once per year. The NAAQS for ozone specify concentrations that may be exceeded no more than 3 days in a 3-year period. The NAAQS also set annual concentrations for NO_2, SO_2, CO, and PM_{10} that may never be exceeded. California ambient air quality standards represent concentrations that should never be exceeded.

Air quality in the SFBAAB is the responsibility of the Bay Area Air Quality Management District (BAAQMD). CO, ozone, and PM_{10} are of greatest concern for the Guadalupe River Project, in part because of the SFBAAB's non-attainment status for ozone and PM_{10}, and also because constructing the project would result in the emission of these pollutants.

The environmental effects of elevated CO, ozone, and PM_{10} concentrations are well known. CO, a product of incomplete combustion, interferes with oxygen transport to body tissues. Ozone is a component of photochemical smog. Its major effects include irritation of the respiratory system and eyes and reductions in plant growth and crop yields. Particulate matter contributes to a wide range of pollution effects, such as reduced visibility, respiratory system irritation, corrosion of materials and structures, and economic effects related to soiling of materials.

Ambient air quality data are routinely measured and reported by California's air pollution control districts and by the California Air Resources Board (ARB). These data are summarized by ARB in quarterly and annual reports. The monitoring station closest to the project area in this section of San Jose is located at the 4th Street station. Recent data collected at the 4th Street station show that State 24-hour PM_{10} standards were exceeded between two and seven times per year in 1994, 1995, 1996, 1997, and 1998. However, no violations of the Federal PM_{10} standards occurred in San Jose during the past 5 years. The monitoring data show no violations of the CO standards during the 5 most recent years for which data are available. The 4th Street station recorded exceedances of the State ozone standard during 4 of the 5 most recent years for which data are available. As many as 14 violations per year occurred during this period.

Air Quality Management. The San Jose area lies within the boundaries of the BAAQMD, which issues permits and enforces the regulations to protect the public health and environment. The County and State have adopted the U.S. Environmental Protection Agency's (EPA) ambient air quality standards.

The general area varies in elevation from 680 feet to over 2,100 feet, which subjects it to a wide range of factors governing the generation and concentration of air contaminants. The project area is subject to heavy influence from air contaminants originating in the San Jose metropolitan area. Other significant sources of air contaminants include Interstates I-880 and 280, Highway 87, and industry located in San Jose. Transport of air contaminants occurs when summer southerly and winter northerly wind patterns create concentrations of air contaminants, which is the more frequent when the atmosphere is stable and the winds light for long periods of time.

The City of San Jose has established that California and Federal standard emission thresholds have been adopted. The project area lies within the jurisdiction of the BAAQMD. The project area is currently classified as being in attainment for carbon monoxide, and non-attainment for PM_{10} for particulate matter and ozone (Corps, 2001). The primary sources of pollutants are vehicles and construction activities.

Sensitive Receptors. Sensitive receptors in the project areas for the new vehicular bridge include those individuals, motorists, and/or wildlife that could be affected by changes in air quality due to emissions from the construction activity. Sensitive land uses and receptors found approximately 500 feet outside the project area include businesses and city offices. In the surrounding area immediately adjacent to the project area at UPRR Bridge No. 4, there is a public parking garage. There are no other sensitive receptors.

3.11.2 Effects

Methods. Air quality effects were evaluated through identification of all potential air emission sources associated with the project, evaluation of potential emissions from construction activities, evaluation of existing requirements for their control, and determination of onsite measures to reduce them to less-than significant levels.

Basis of Significance. An alternative plan would be considered to have a significant effect on air quality if it would violate any ambient air quality standard, contribute on a long-term basis to an existing or projected air quality violation, expose sensate species or humans to substantial pollutant concentrations, or not conform to applicable Federal, State, and local standards.

No Action Alternative. Under this alternative there would be no effect on existing air quality in the project area. Air quality would continue to be influenced by climatic conditions, wild fires, and local and regional emissions from vehicles and industry.

New Vehicular Bridge Alternative. Over a period not to exceed 6 months in any given year, this alternative plan would result in short-term effects on air quality during construction at the project site including activities at the existing roadways and staging area. The primary period of temporary effects to air quality would occur when heavy equipment is used more extensively, which would at the highest level of use for a period of about the first 12 weeks of construction beginning in the summer/early fall. There would be a significant reduction in the use of heavy equipment during the last month of construction when the majority of the planting and compacting activities would be undertaken. Smaller gas-emitting equipment and vehicles would be periodically used throughout the entire construction period. Gas-emitting equipment that could be used during construction would likely include drill rigs (for bore hole samples), cranes, pile drivers, bulldozers, asphalt pavers, watering trucks, backhoes, front-end loaders, excavators, dump trucks, water pumps, generators, grader, roller, cement trucks, and an auger for planting vegetation. Over a 7-month period (one construction season), the total number of man-hours for all construction activities where the used of gas-emitting equipment is estimated at approximately 18,002 man-hours.

Equipment emissions could temporarily exceed exhaust and PM_{10} standards. However, since the City of San Jose had adopted standard emission thresholds, EPA's *de minimus* conformity thresholds were then used to determine the significance of the calculated air quality emissions. The amount of emissions for each pollutant would be significant if it exceeded the EPA *de minimus* conformity threshold of 100 tons. Due to the low effort to excavate and limited use of heavy equipment for other construction activities spread out over one or two summer/early fall construction seasons for a maximum of 6 months, the results of the comparison indicated that emission levels ranged between minimal and negligible not exceeding an estimated average of 57 pounds (lbs)/day for ROG, 349 lbs/day for CO, 495 lbs/day for NO_X, and 32 lbs/day for PM_{10}. Fugitive Dust PM_{10} does not exceed 5 lbs/day. PM_{10} estimates assume 50 percent control of fugitive dust from watering and associated dust control measures since a minimum number of water trucks are specified.

Coordination with the BAAQMD would be initiated prior to construction and the City and the Corps would continue to work with any representatives to address any concerns or implement any required mitigation measures related to air quality.

3.11.3 Mitigation

Based on the results of the air quality analysis that does not exceed Federal limits, no mitigation is required since emissions from construction equipment used over a one to two-year period for the proposed project were determined to be at minimum or negligible limits. In addition, the City of San Jose would require the contractor to obtain a fugitive dust control plan/air quality disturbance permit prior to initiation of construction. The permit would include BMP's required to ensure that there is avoidance or reduction of the amount of exhaust and PM_{10} generated during construction. Some of these practices could include water trucks, sprinklers, fences or windbreaks, revegetation, and speed limits. Due to the use of reduction measures and the temporary nature of the emissions over two construction seasons from 2008 to 2009, the air quality effects associated with the construction would be less than significant.

The BMP's that could be used to minimize airborne dust include two or more of the following measures: (1) air monitoring; (2) a gravel pad design using good engineering practices to clean the tires of exiting vehicles, a tire shaker, a wheel wash system, and pavement extending for not less than 50 consecutive feet from the intersection with the paved public road, (3) covering the stockpiled or hauled material with a tarp or plastic sheeting to prevent spills and blowing off; (4) wetting stockpile using a water spray and installation of wind barriers across open areas; (5) traffic control restrictions of a maximum speed limit of 15 miles per hour, (6) applying chemical dust suppressants consistent with manufacturer's directions; and (7) hydroseeding to reestablish native herbaceous vegetation along the channel and in the upland areas.

Specifically, the following required BMP’s would be used by the contractor to reduce the effects to air quality to less than significant level:

- Water all construction sites at least twice daily.
-

- Cover all trucks hauling soil or other materials, or require all trucks to maintain at least 2 feet of freeboard.
- Pave, apply water three times daily, or apply soil stabilizer on all unpaved access roads, parking areas, and staging areas.
- Sweep daily all paved access roads, parking areas, and staging areas.
- Sweep streets daily if visible soil material is carried onto adjacent public streets.
- Methods for dust control include sprinkling, chemical treatment, and light bituminous treatment.
- Materials may not be burned within the project site at any time.

3.12 Noise

3.12.1 Existing Conditions

Noise Management. Santa Clara County and the City of San Jose provide for noise management. The City's General Plan states, "…operation noise impacts on surrounding uses must be minimized through appropriate control measures such as noise abatement or limiting periods of operation."

Noise Sources and Sensitive Receptors. The primary sources of noise in the project area are from human activity at nearby residences and office buildings, the operation of motor vehicles, and natural sounds such wind, and wildlife. The sensitive receptors are humans and wildlife. In the immediate surrounding area, the areas that could have sensitive receptors include areas where humans use such as offices for small and corporate businesses.

Typical examples of noise standards for non-transportation noise in residential areas of the City of San Jose are 55 average day/night noise level in decibels (L_{dn}) as the long-term exterior noise level, 60 L_{dn} as the short-term exterior noise level, and 76 L_{dn} as the maximum exterior noise level.

3.12.2 Effects

Basis of Significance. An alternative would be considered to have a significant effect on noise if it would substantially increase the ambient noise levels for adjoining areas. The significance of temporary noise effects is evaluated with reference to existing noise levels, the duration of the noise, and the number of sensitive receptors affected by construction activities.

No Action Alternative. This alternative would have no effects on existing noise in the project area. Current noise sources and levels would be expected to remain about the same.

New Vehicular Bridge Alternative. This alternative would result in short term, temporary effects to human and wildlife receptors from increasing noise levels in the project area during construction. Most noise would be attenuated to near background levels prior to reaching receptors in the area and the surrounding trees would help buffer the noise effects. To reduce the adverse effects to receptors that would experience less than significant level of effects, the

Contractor would be required to comply with local ordinances. The local ordinances include the restriction of the use of tools and equipment that produce harmful noise, which would minimize complaints from businesses and public places located near the project site.

3.12.3 Mitigation

No mitigation is required. The construction area would generally be limited to the existing public roadway and the staging area at the existing mall and Sobrato parking lots. Outdoor activity areas would be designed so that they are shielded from noise by buildings or other structures and achieve a minimum 65 decibels $L_{dn.}$

However, several measures would be implemented to reduce the project's short-term effects on any noise-sensitive receptors. Implementing the following best management practice measures would reduce short-term effects from noise during construction to less than significant level:

All construction activities shall be limited to the following as allowed by the San Jose Municipal Code:

Weekend construction hours, including staging of vehicles, equipment and construction materials, shall be limited to Saturdays between the hours of 9 a.m. to 5 p.m. Exterior generators, water pumps, compressors and idling trucks are not permitted. The contractor shall be responsible for educating all workers and subcontractors of said construction restrictions. Rules and regulation pertaining to all construction activities and limitations identified in this permit, along with the name and telephone number of a contractor appointed disturbance coordinator, shall be posted in a prominent location at the entrance to the job site. The Director of Planning, at his discretion, may rescind provisions to allow extended hours of construction activities on weekends upon written notice to the contractor. Other measures include:

- Prohibit unnecessary idling of internal combustion engines.
- Designate a "noise disturbance coordinator" who would be responsible for responding to any local complaints about construction noise. The disturbance coordinator would determine the cause of the noise complaints (for example, beginning work too early or bad muffler) and institute reasonable measures warranted to correct the problem. A telephone number for the disturbance coordinator would be conspicuously posted at the construction site.

3.13 Cultural Resources

3.13.1 Existing Conditions

The area of potential effects (APE) for the entire Guadalupe River project was initially surveyed in 1984 (Cartier et al., 1994), and again in 1989 (Garaventa et al., 1991). The part of the APE, between Coleman Avenue and East Julian Street, where the former Railroad Bridge was located was found to be negative for cultural resources. The APE is a highly degraded river

bank that suffered extensive disturbance from the flood of record in 1997. Additionally, the entire project area has been totally disturbed from the Guadalupe River Construction project.

The UPRR Bridge No. 3 has been removed, and the creosote soaked supports have been cut off at about two feet above the current water level. The river bank has been covered with straw matting to facilitate revegetation of the embankment to prohibit erosion. The bridge location is overgrown with herbaceous vegetation to suggest that a wooden trestle type railroad bridge had been in place. The only remaining visible feature is three cutoff supports in the river channel.

3.13.2 Effects

Basis of Significance. An alternative would be considered to have a significant effect on cultural resources if it would result in a substantial disruption in soils where prehistoric Indian burials or artifacts are unearthed and disturbed.

No Action Alternative. Assuming there is no project planned, there are no cultural resources in the area that will be affected as a result of no project .

New Vehicular Bridge Alternative. Construction of a new vehicular bridge would not have any effects on cultural resources. All that remains is the stumps of bridge supports.

3.13.3 Mitigation

Since no known cultural resources would be affected by the project, mitigation would not be required. However, if human remains are discovered during construction, the Corps would have an archeological monitor onsite during ground-disturbing activities. Construction would cease until the provisions of Stipulation 9, treatment of Native American remains, of the Guadalupe River Memorandum of Agreement are met.

4.0 CUMULATIVE AND GROWTH-INDUCING EFFECTS

4.1 Cumulative Effects

Cumulative effects are effects of a proposed project when considered with other past, present, and reasonably foreseeable future projects in or near the project area. Chapter 6 in the 2001 GRR/EIR/SEIS identified more than 18 projects in or near the flood control project area and included a lengthy discussion of potential cumulative effects and mitigation for the project.

4.1.1 Projects

The past, present, and reasonably foreseeable future projects in or near the vehicular bridge project area would be the same as in the 2001 GRR/EIR/SEIS. Because of the nature of this project, this EA limits the discussion of cumulative effects to other projects on the Guadalupe River. These include the Corps' Guadalupe River Flood Control Project, SCVWD's Upper Guadalupe River Flood Control Project, and SCVWD's Lower Guadalupe River Flood

Protection Project. The Corp's flood control project is described in detail in the 2001 GRR/EIR/SEIS.

The SCVWD's Upper Guadalupe River Flood Control Project begins at Interstate Highway 280 at the edge of downtown San Jose and extends south for approximately 5.5 miles. The project uses a combination of bypass channels, floodwalls, and some channel widening to achieve flood damage reduction, and is expected to aid the long-term recovery of riparian forest habitat and salmonid migration.

The SCVWD's Lower Guadalupe River Project begins at the Interstate Highway 880 bridge and extends north about 6.5 miles to the UPRR bridge in Alviso. The project uses a combination of floodwalls or levee work, bridge replacement, storm drain outfall modifications, weirs, and levee improvements to achieve flood damage reduction, protect endangered species, preserve fish and migratory bird habitat, and allow for open-space recreation.

4.1.2 Cumulative Effects

Adverse effects include the cumulative loss of SRA cover vegetation that supports fish, wildlife, and listed species, and degradation of water quality. The Guadalupe River Flood Control Project would affect a total of approximately 9,800 linear feet of SRA cover. The Upper Guadalupe River Project would affect approximately 3,959 linear feet of SRA cover and 359 linear feet of undercut banks (Science Applications International Corporation, 1997).

Construction of the vehicular bridge would result in the loss of 300 linear feet (0.10 acre) of the SRA mitigation plantings completed in December 2007 as part of the flood control project, and 0.41 acre (1,230 linear feet) of mixed riparian forest habitat above the shoreline SRA zone. This loss of riparian habitat would further reduce what little high quality terrestrial habitat still exists on the Guadalupe River. Removal of SRA cover could also result in cumulative effects on aquatic habitat and species in the river.

However, these projects would be required to comply with all Federal, State, and local environmental laws and regulations to avoid, minimize, or mitigate effects to less than significance. Mitigation measures for the vehicular bridge project are discussed in this EA. Implementation of these measures would reduce cumulative effects to less than significant.

4.2 Growth-Inducing Effects

The construction of the vehicular bridge would not result in growth-inducing effects. Much of the surrounding area is either developed or planned for development by either the City of San Jose or the UPRR. The project would only replace the UPRR's pre-project capability to access their property based on the determination of their compensable interest in the bridge. The vehicular bridge project does not include constructing any new roadways or sections of roadway.

5.0 U.S. FISH AND WILDLIFE SERVICE RECOMMENDATIONS

The USFWS provided the Corps with a Supplemental CAR dated September 18, 2006, for proposed modifications to the Guadalupe River Flood Control Project. The recommendations from that Supplemental CAR are presented below. The Corps' responses follow each recommendation.

The USFWS recommends that the Corps:

1. Construct the east bank pedestrian under-crossing of UPRR #4, provided that mitigation at the 1.8 acre west bank site is included (see recommendation #2).

Corps response: The upland area for planting terrestrial plants was reduced from 1.8 acres to 1.5 acres to ensure that maintenance access on the south side the new bridge is retained.

2. Mitigate for the east bank pedestrian under-crossing of UPRR #4 with riparian restoration of the 1.8 acre site on the west bank as described in the July 16, 2001, Supplemental Description. Plans for this mitigation should be submitted to the USFWS for Review.

Corps response: The mitigation plans were submitted to the USFWS for their review by email on June 25, 2007.

3. Not construct a vehicular bridge at the former location of UPRR #3.

Corps response: As explained in the EA, the Corps feels there is compensable interest and that offsite excess mitigation credit compensates for the adverse effects to the riparian plantings in the vehicular bridge project area.

4. Plan and install as soon as possible, all remaining infill mitigation within Contract 3 as described in the GRR, including those sites in the vicinity of former UPRR #3 (sites 3A-6 and 3A-9), and Old Julian Street Bridge (sites 3A-1, 3A-3, and 3A-4). Sufficient assurances should be developed to protect this mitigation in perpetuity.

Corps response: Except for herbaceous plants, 730 linear feet of SRA infill mitigation were completed in December 2007. The area for the remaining 148 linear feet agreed to in 2001 has revegetated through natural recruitment and is currently providing SRA cover habitat. The vegetation includes exotic plant species. The remaining herbaceous vegetation will be planted in the spring of 2008.

5. If essential to replace UPRR No. 4 in advance of completing the infill mitigation, proceed with this replacement and provide the USFWS with a schedule for bridge replacement and mitigation installation.

Corps response: The schedule for UPRR Bridge No. 4 has been provided to the USFWS.

6. Provide the USFWS and other resource agencies with a complete and current accounting of the completion status of all infill mitigation sites for the Downtown Project.

Corps response: Except for herbaceous plants, 730 linear feet of infill mitigation were completed in December 2007. The area for the remaining 148 linear feet agreed to in 2001 has revegetated through natural recruitment and is currently providing SRA cover habitat. The vegetation includes exotic plant species. The remaining herbaceous vegetation will be planted in the spring of 2008.

7. In collaboration with the SJRA, study alternative means of public access to the UPRR property of interest.

Corps response: The alternative means of public access study was provided for review to the resource agencies by email on March 16, 2007. The findings of the study is included in the draft EA.

6.0 COMPLIANCE WITH FEDERAL ENVIRONMENTAL LAWS

Clean Air Act, as amended and recodified (42 U.S.C. 7401 et seq.) *Full Compliance.* The proposed project is not expected to violate and Federal or State air quality standards, or hinder the attainment of air quality objectives in the SFBAAB. The Corps has determined that the proposed project would have adverse effects, but no significant adverse effects on the future air quality of the area with the use of BMP's.

Clean Water Act (33 U.S.C. 1251 et seq.) *Full Compliance.* The project would have short-term effects, but not result in significant adverse effects to water quality since the project consists of dewatering and using BMP's to minimize the effects while working in the channel and from stormwater runoff pollution. The project would comply with appropriate State and local codes regarding public water systems.

Endangered Species Act (16 U.S.C. 1531 et seq.) *Partial Compliance.* Steelhead (and their critical habitat) is the only Federally listed species identified in the project area that could be adversely affected by in-channel construction of the vehicular bridge. Section 7 consultation with NMFS is being reinitiated and will be completed before the EA is finalized. The candidate chinook salmon could also be affected. No other protected species are likely to be adversely affected by the proposed vehicular bridge project.

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations. *Full Compliance.* The order directs all Federal agencies to identify and address adverse human health or environmental effects of their programs, policies, and activities on minority and low-income populations. There are no minority or low-income populations in the project area of the vehicular bridge.

Fish and Wildlife Coordination Act (16 U.S.C. 661, et seq.) *Partial Compliance.* Coordination with the USFWS been ongoing throughout planning and construction of the flood

control project. The USFWS has submitted its draft CAR to the Corps, which presents the USFWS's views on the proposed action. The draft CAR is included as Appendix B. The Corps' responses to the USFWS's recommendations are included in Section 5.0. The project will be in compliance with this act once USFWS provides the final CAR.

Magnuson-Stevens Fishery Conservation and Management Act. *Partial Compliance*. Steelhead (and their critical habitat) is the only Federally listed species identified in the project area that would be adversely affected by in-channel construction of the vehicular bridge. The proposed project would result in adverse effects to essential fish habitat consisting of the aquatic environment and riparian vegetation, including SRA cover. The project will be in compliance with this act once Section 7 consultation with NMFS is completed.

Migratory Bird Treaty Act, as amended (16 U.S.C. 703 et seq.). *Full Compliance.* This act implements various treaties and conventions between the U.S. and Canada, Japan, Mexico, and the former Soviet Union for the protection of migratory birds. Construction of the vehicle bridge project would be scheduled to avoid adversely affecting any migratory bird species. The project would benefit migratory birds by planting riparian vegetation that would provide additional habitat for resting, foraging, and cover.

National Environmental Policy Act (42 U.S.C. 4321 et seq.) *Partial Compliance.* This draft EA and the accompanying Finding of No Significant Impact (FONSI) are in partial compliance with this act. Any public comments received on the draft EA will be incorporated into the final EA, as appropriate.

National Historic Preservation Act of 1966, as amended (16 U.S.C. 470 et seq.) *Partial Compliance.* The Guadalupe River Flood Control Project is in compliance with Section 106 via a Memorandum of Agreement executed on June 18, 1992. The APE is limited to the location of the former UPRR Bridge No. 3, which has already been disturbed extensively by flood waters and sediment deposition, construction of a pedestrian trail on both sides of the river, and replanting vegetation.

A Corps archeologist has reviewed the project and has determined that no National Register eligible or listed properties would be affected by this project. A letter will be submitted to the State Historic Preservation Officer (SHPO), requesting their concurrence with the Corps determination that the project as planned would have no effect on historic properties. A copy of the response from the SHPO will be included in the final EA.

7.0 REVIEW OF THE DRAFT EA

The draft EA and FONSI will be made available for 30 days for public review and comment. The Corps' will mail a copy of the draft report to all known interested individuals, agencies, and organizations. Any comments received on the draft EA would be addressed and incorporated, if appropriate, into the final EA.

8.0 CONCLUSIONS

Based on the evaluation in this draft EA, construction of the vehicular bridge project could have adverse effects on environmental resources and the quality of the human environment. However, construction activities would be scheduled to avoid adverse effects to the extent possible. In addition, implementation of BMP's during construction and use of offsite mitigation credits at Guadalupe Creek would reduce these adverse effects to less than significant. Following the public review period, a determination will be made whether a FONSI is warranted or whether preparation of SEIS is necessary. A draft FONSI has been prepared and accompanies this draft EA.

9.0 LIST OF PREPARERS

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10.0 LIST OF AGENCIES CONSULTED

The agencies consulted on this project include the SCVWD, USFWS, NMFS, San Francisco Bay RWQCB, CDFG, and SHPO.

11.0 REFERENCES

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11.1.2 Personal Communications

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